

# Transistors

## 2N5550

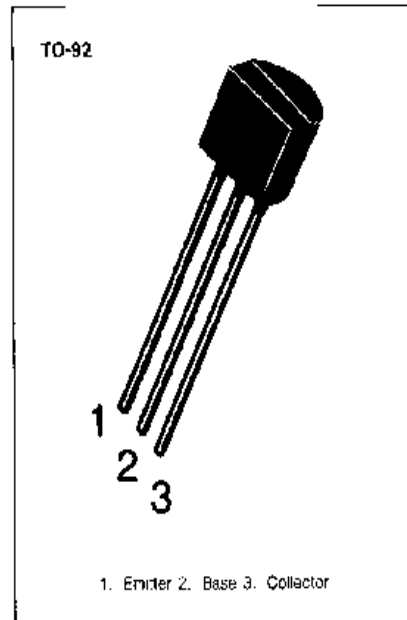
### AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage:  $V_{CE0} = 140V$
- Collector Dissipation:  $P_C (max) = 625mW$

### ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ C$ )

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	160	V
Collector-Emitter Voltage	$V_{CEO}$	140	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	600	mA
Collector Dissipation	$P_C$	625	mW
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ 150	$^\circ C$

• Refer to 2N5551 for graphs



### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 100\mu A, I_E = 0$	160			V
*Collector-Emitter Saturation Voltage	$BV_{CEO}$	$I_C = 1mA, I_B = 0$	140			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 10\mu A, I_C = 0$	6			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 100V, I_E = 0$			100	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{BE} = 4V, I_C = 0$			50	nA
*DC Current Gain	$h_{FE}$	$I_C = 1mA, V_{CE} = 5V$	60			
		$I_C = 10mA, V_{CE} = 5V$	60		250	
		$I_C = 50mA, V_{CE} = 5V$	20			
*Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 1mA$			0.15	V
		$I_C = 50mA, I_B = 5mA$			0.25	V
*Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 10mA, I_B = 1mA$			1	V
		$I_C = 50mA, I_B = 5mA$			1.2	V
Current Gain Bandwidth Product	$f_T$	$I_C = 10mA, V_{CE} = 10V$	100		300	MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0$ $f = 1MHz$			6	pF
Noise Figure	NF	$I_C = 250\mu A, V_{CE} = 5V$ $R_S = 1K\Omega$ $f = 10Hz$ to $15.7KHz$			10	dB

\* Pulse Test: Pulse Width =  $300\mu S$ , Duty Cycle = 2%

